

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION APPLICATION PROCESSING AND CALCULATIONS	PAGE 1	PAGES 4
	APPL. NO. 484059 Em ICE	DATE 07/25/08
	PROCESSOR MFN	REVIEWER

PERMIT TO OPERATE ANALYSIS

FACILITY MAILING ADDRESS

California Steel Industries
14000 San Bernardino Avenue
Fontana, California 92335

(ID: 046268 NOx RECLAIM Cycle 1 – Title V)

EQUIPMENT LOCATION

SAME AS ABOVE

EQUIPMENT DESCRIPTION

APPLICATION NO. 484060 - TITLE V PERMIT REVISION

APPLICATION NO. 484059 - PERMIT TO OPERATE
PROCESS 2: INTERNAL COMBUSTION ENGINES

INTERNAL COMBUSTION ENGINE, EMERGENCY, GENERAC POWER SYSTEMS, INC., RICH BURN, NATURAL GAS FIRED, ELECTRIC POWER GENERATION, MODEL NO. QT070, NATURALLY ASPIRATED, TEN CYLINDERS, FOUR CYCLE, 110.7 BHP, WITH NON-SELECTIVE CATALYTIC REDUCTION, NETT TECHNOLOGIES, INC.

BACKGROUND

Application No. 484059 was filed on June 13, 2008, for a Class I permit to operate. Application No. 484060 was filed on June 13, 2008, for a RECLAIM facility permit modification.

Complaints

There were no complaints credited to this facility for the past two years.

Notices to Comply

D14669, 11/9/07 to provide a copy of SK contract for 05 & 06, waste manifests & purchase invoices for 05 & 06, solvent usage records, facility layout and purchase invoices for 2007.

All requested information was provided during the follow-up inspection.

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Notice of Violation

P49086, 11/30/07 for failure to use compliant solvent for repair & maintenance cleaning. Failure to use compliant solvent for solvent degreasing in a batch loaded cold cleaner.

PROCESS DESCRIPTION

California Steel Industries, Inc. (CSI) is a steel rolling mill that produces hot rolled, cold rolled, pickled and oiled and galvanized steel products, they also produce electric resistance welded pipe.

CSI wishes to install this natural gas Emergency Electrical Generator (EEG) to power equipment in the Information Services Department (ISD) during power outages and emergencies. The ISD houses important servers and computers they wish to remain functioning during a power outage.

EVALUATION

Given:

Operating Schedule: 1 hr/day, 1 day/wk, 52 wks/yr
(District Default for Emergency Engines)
System Manufacturer: Generac Power Systems
Rating: 110.7 BHp
Fuel: Natural Gas
Fuel Usage Rate: 1020 ft³/hr
NSCR Manufacturer: Nett Technologies, Inc.

$$R1 = R2$$

$$R1 \text{ (lb/hr)} = \frac{\text{hp} \times \text{gr/bhp-hr}}{454 \text{ gr/lb}}$$

Per Table 1 of Rule 2002 titled RELCAIM NOx Emission Factors, NOx emission factor for an ICE is the equivalent to the permitted BACT limit.

$$\text{NO}_{x\text{RECLAIM}} = \frac{(1.5 \text{ gr/bhp-hr}) \times (110.7 \text{ bhp}) \times (1,000,000 \text{ cf/mmcf})}{(454 \text{ gr/lb}) \times (1020 \text{ cf/hr})} = 358.5 \text{ lb/mmcf}$$

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Pollutant	Emission factor, R1 g/bhp-hr	Emission factor, R2 g/bhp-hr	Emission rate lb/hr	Daily emission lb/day	BACT Limit g/bhp-hr	BACT compliance
NOx*	12.35	0.74	0.1804	0.18	1.50	Yes
CO*	6.78	0.95	0.2316	0.23	2.0	Yes
ROG*	0.9	0.18	0.0439	0.04	1.5	Yes
PM ₁₀	10.0**	10.0	0.0102	0.01	Clean Fuel	Yes
SOx	0.6**	0.6	0.000612	0.00	Clean Fuel	Yes

* NOx, CO and ROG emission factors based on Nett Technologies' Letter of Compliance dated June 4, 2008

** PM₁₀ and SOx emission factors are District Default for 4 Stroke, Rich-Burn Engines and in lb/mmcf.

RULES COMPLIANCE

RULE 212 Public Notification

Paragraph 212 (c)(1) Requires a public notice for all new or modified permit units that may emit air contaminants located within 1,000 feet from the outer boundary of a school. According to the website geodistance.com the closest school, Live Oak Elementary School is over 1 mile from California Steel Industries' property line. A 30-Day Public Notice is not required under this paragraph.

Paragraph 212(c)(2) The equipment will not result in on-site emission increase exceeding the daily maximums as specified in the table in Rule 212(g). Therefore, a 30-day public notice period will not be required under this paragraph.

Paragraph 212(c)(3) Public notice will not be required under this paragraph. See Rule 1401 evaluation section.

RULE 401 Compliance is expected. Visible emissions re not expected with proper maintenance and operation of this equipment.

RULE 402 Compliance is expected. Operation of this equipment is not expected to cause a nuisance.

RULE 404 Engine is in compliance with this rule. Per table 404(a), the allowable PM concentration at 557 scfm is 0.196 gr/scf

$$PM = \frac{0.0102 \text{ lb/hr} \times 7000 \text{ gr/lb}}{557 \text{ scfm} \times 60 \text{ min/hr}} = 0.002 \text{ gr/scf}$$

RULE 431.1 Natural gas purchased is required to have a sulfur content less than 16 ppmv. Compliance is expected.

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RULE 1110.2 Engine is exempt per section (h)(2) of this rule.

REG XIII This engine is in compliance with **BACT**, see table above. The engine is exempt from **Modeling** and **Offsets** per R1304 (a)(4).

RULE 1401 Exempt per section (g)(1)(F) of this rule.

REG XX NOx emissions would be offset by CSI's available NOx RTC's

REG XXX This is a de minimus significant permit revision. EPA 45-day review is required.

RECOMMENDATION

Issue Permit to Operate as described in this report and facility permit after the end of the 45-day EPA review period.